PATENT SPECIFICATION (11) 1372491

1372491

(21) Application No. 8737/72 (22) Filed 25 Feb. 1972
(23) Complete Specification filed 8 May 1973
(44) Complete Specification published 30 Oct. 1974
(51) International Classification B65B 67/12; B65D 33/16//29/00, 33/14
(52) Index at acceptance B8C 15B 15E3 M
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(19)

(54) WASTE DISPOSAL CONTAINERS

(71) We, MUCON ENGINEERING COMPANY LIMITED, a British Company, of Winchester Road, Basingstoke, Hampshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to waste disposal, and in particular to containers therefor.

In recent years the traditional dustbin or similar waste receptacle, which is periodically emptied, has to some extent been replaced by disposable containers, e.g. paper bags, which are removed when filled and replaced by a fresh clean bag. As well as reducing the amount of labour involved in refuse collection, the disposable container has hygienic advantages. Such a disposable container is, when in use, held by a carrier with its mouth open, the carrier being mounted on a stand, a building wall or other convenient permanent support. In addition to supporting the container the carrier is also normally provided with a lid generally hinged to cover the open mouth of the container.

It is an object of the invention to provide an improved form of waste disposal container which is itself disposable and which incorporates a closure means as an integral part which both replaces and is more efficient than the known hinged lid.

A waste disposal container in accordance with the invention comprises a sack or bag of flexible material having a cylindrical wall, a rigid circular ring attached to the end of the wall at the mouth of the sack or bag, and a second rigid circular ring attached to the wall so as to be spaced from and parallel to the first-mentioned ring when the wall portion between the two rings assumes a cylindrical configuration, the wall portion between the rings being of a length such that when one ring is rotated relative to the other the wall portion is twisted to form an iris diaphragm which closes the sack or bag.

The invention also includes a waste disposal unit comprising a carrier member adapted to be attached to a rigid support and having a circular aperture and a container as aforesaid mounted on the carrier member so as to be suspended below the aperture with the rings thereof in superposed adjacent relation and surrounding the aperture and capable of relative rotary movement between an open position of the container in which the wall portion between the rings is folded on itself to form a double-walled sleeve lying within the remaining portion of the container wall, and a closed position in which the said wall portion between the rings is twisted by rotation of the rings relative to each other to form an iris diaphragm across the aperture so as to seal off the container interior.

A preferred embodiment of the invention will now be described in detail by way of example with reference to the accompanying drawings in which:—

Figure 1 shows, in perspective, a waste disposal container according to the invention with an upper part thereof twisted to indicate the manner of closure.

Figure 2 shows a plan view of a carrier member for the container, and

Figure 3 shows a side elevation of the carrier member.

As shown in the drawings a waste disposal container comprises an open mouthed bag 1 (Figure 1) of right circular cylindrical shape made of plastics sheet material, paper, or other flexible material.

A rigid circular ring 2 is attached to the top of the cylindrical container wall around the container mouth and a second similar ring 3 is attached to the container wall so as to lie in parallel relationship with the first-mentioned ring with the container wall unflexed, the rings being suitably spaced to enable the wall between them to form an iris diaphragm when the rings are relatively rotated as described below.

A carrier member for the container (Figures 2 and 3) comprises a sheet metal plate 5 having a flange 6 along part of its periphery

[Price 25p]

adapted to be bolted or otherwise attached to a permanent support, e.g. a stand or wall, so that the plate is mounted in the horizontal position. The plate has a circular aperture 7 through it having a diameter slightly less than that of the container rings and the sheet metal of the plate surrounding the aperture is radially slit for a short distance at intervals to form tags which are then bent upwardly to provide upstanding clips or lugs 8 at three or more spaced-apart positions.

The container is inserted into the aperture 7 in the plate and the two rings 2, 3 are positioned in superposed relationship around the aperture periphery, the rings being held in such a position by the clips or lugs 8 overlying them. The portion of container wall 4 (Figure 1) between the two rings is folded on itself so as to form a double-walled sleeve lying within the remainder of the container which hangs below the plate.

When thus mounted the container is open to receive refuse and can be closed by rotating the topmost ring 2 attached to the container mouth relatively to the low ring 3 whereupon the double-walled sleeve is twisted in similar fashion to that shown in Figure 1 to form a diaphragm which lies across the aperture 7 and thus seals off the interior of the container. It will be clear that when the container is to be re-opened for placing further refuse therein all that is necessary is to rotate the topmost ring 2 in the opposite direction and so untwist the inter-ring wall portion 4 to re-open the aperture whereafter the container can once again be re-closed by again rotating the topmost ring 2 to cause the wall portion to resume its diaphragm form.

The entire container including the rings can be made very cheaply and thus when the container is filled it can be removed entirely for ultimate disposal with its contents and replaced with a fresh container.

WHAT WE CLAIM IS:—

1. A waste disposal container comprising a sack or bag of flexible material having a cylindrical wall, a rigid circular ring attached to the end of the wall at the mouth of the sack or bag, and a second rigid circular ring attached to the wall so as to be spaced from and parallel to the first-mentioned ring when the wall portion between the two rings assumes a cylindrical configuration, the wall portion between the rings being of such length that when one ring is rotated relative to the other, said wall portion is twisted to form an iris diaphragm which closes the sack or bag.

2. A waste disposal unit comprising a carrier member adapted to be attached to a rigid support and having a circular aperture, and a container according to claim 1 mounted on the carrier member so as to be suspended below the aperture with the rings thereof in superposed adjacent relationship and surrounding the aperture so as to be capable of relative rotary movement between an open position of the container in which the wall portion of the sack between the rings is folded on itself to form a double-walled sleeve lying within the remaining part of the container wall, and a closed position in which the said wall portion between the rings is twisted by rotation of the rings relative to each other to form an iris diaphragm across the aperture to seal off the container interior.

3. A waste disposal unit according to claim 1 in which the carrier member comprises a sheet metal plate having a flange extending along at least part of its periphery to form an attachment part for attaching the unit to the rigid support.

4. A waste disposal unit according to claim 3 in which the material of the plate of the carrier member surrounding the aperture therein is deformed to provide upstanding clips at spaced-apart positions to locate and retain the rings of the container.

5. A waste disposal container constructed and arranged substantially as hereinbefore described and shown in Figure 1 of the accompanying drawings.

6. A waste disposal unit constructed and arranged substantially as hereinbefore described and shown in the accompanying drawings.

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Printed for Her Majesty's Stationery Office by the Courier Press, Leamington Spa, 1974.
Published by the Patent Office, 25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.

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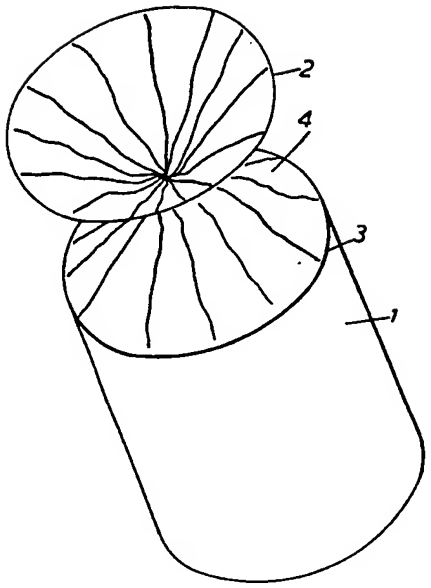
2 SHEETS *This drawing is a reproduction of the Original on a reduced scale*
Sheet 1

FIG.1.



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Sheet 2

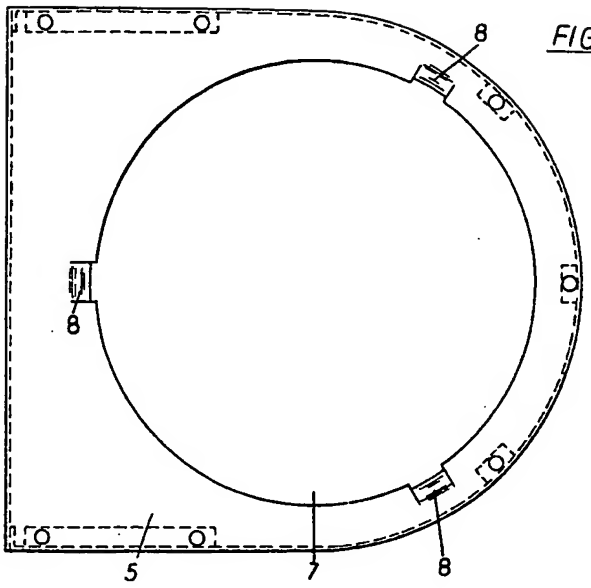

FIG.2

FIG.3